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Thoroughfare Plan

Halifax

North Carolina

State Highway Commission

JUL 23 1981

PRELIMINARY THOROUGHFARE PLAN

for

HALIFAX, NORTH CAROLINA

Prepared by the

Planning and Research Department

North Carolina State Highway Commission

February, 1971

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I. INTRODUCTION

The thoroughfare plan presented in this report was developed following the basic thoroughfare planning principles as described in Chapter II. It is based on very general traffic, population, land use, and economic data. Since sufficient comprehensive information concerning the origins and destinations of traffic movements was not available, the projection of traffic to future years was not undertaken. Major thoroughfares were located based on field investigations, existing and anticipated land uses, and topographic conditions. The plan sets forth those improvements which are expected to be required for proper traffic circulation within the current planning period (1970-1990).

The responsibility for the proposed improvements will be divided between the Highway Commission and the Town of Halifax. It is desirable that the thoroughfare plan be formally adopted both by the local governing body and the Highway Commission in order to insure coordination of efforts.

It should be emphasized that the plan is based on the anticipated growth of the urban area as indicated by current trends. Moreover, since additional study will be required before construction begins on the recommended improvements, the plan must be considered preliminary.

II. THOROUGHFARE PLANNING PRINCIPLES

Typically, the urban street system occupies 25 to 30 percent of the total developed land in the urban area. Since the system is permanent and expensive to build and maintain, much care and foresight are needed in its development. Thoroughfare planning is the process used by public officials to assure the development of the most logical and appropriate street system to meet existing and future travel desires within the urban area. The major steps involved in the thoroughfare planning process are:

1. Collecting data relative to present physical and travel conditions within the urban area.

2. Estimating future traffic conditions within the urban area.

3. Evaluating the data to determine the adequacy of the existing street system in meeting present and anticipated traffic conditions.

4. Devising the best thoroughfare plan, on the basis of sufficiency, economic benefits, construction costs, and compatibility with other elements of the urban development program, to meet future travel desires.

5. Implementing the plan.

Purpose of Planning

There are many benefits to be gained from thoroughfare planning, but the primary objective is to assure that the urban street system will be progressively developed in such a manner as to adequately serve future travel desires. Thus, the cardinal concept of thoroughfare planning is that provisions be made for street and highway improvements so that, as needs arise, feasible opportunities to make improvements exist.

The major benefits derived from thoroughfare planning are: (1) Each street can be designed to perform a specific function. This permits savings in rights-of-way, construction, and maintenance costs, protects residential neighborhoods, and encourages stability in travel and land use

patterns. (2) Local officials and citizens are informed as to future improvements. Developers can design subdivisions to function in a non-conflicting manner. School and park officials can better locate their facilities. Irretrievable damage to property values and community appearance, as is sometimes associated with street building and widening programs, can be minimized. City officials will know when improvements will be needed and can schedule funds accordingly.

Thoroughfare Concept

Streets perform two primary functions-they provide traffic service and land service. These two functions, when combined, are basically incompatible. The conflict is not serious if both traffic and land service demands are low. But when traffic volumes are high, conflicts created by uncontrolled and intensely used abutting property result in intolerable traffic flow friction and congestion.

The underlying concept of the thoroughfare plan is that it provides a functional system of streets which permits travel from origins to destinations with directness, ease, and safety. Different streets in the system are designed and called on to perform specific functions, thus minimizing the traffic and land service conflict. Streets can be categorized as to function and standards applied as follows (Figure 1):

Local Access Streets

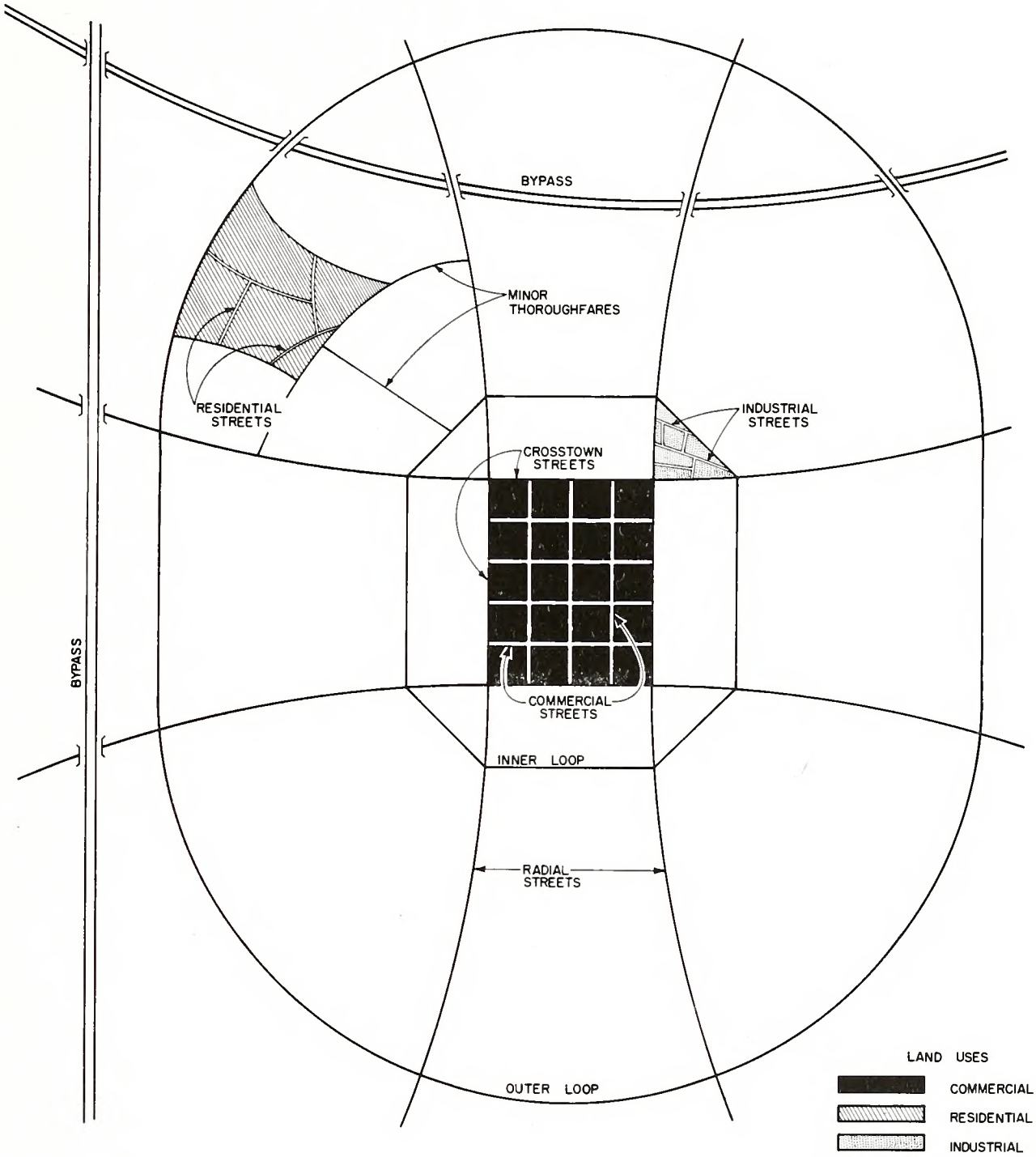
These streets have the purpose of providing access to abutting property. They are not intended to carry heavy volumes of traffic and should be located in such a way to serve only traffic with origins or destinations on these streets. There are several different types of local access streets which can be classified according to the type of abutting land use which they serve. They are:

Residential Streets: Residential streets provide access to abutting residential property. Through traffic movements should be discouraged by designing them as loops or cul-de-sacs (dead-end streets with turn arounds). These streets should have two traffic lanes and may have parking on one or both sides. They should have a minimum right-of-way of 60 feet.

Commercial Streets: Commercial streets provide access to abutting commercial property. They permit traffic to circulate in commercial areas and to reach parking

FIGURE 1

IDEALIZED THOROUGHFARE PLAN



facilities near their desired destinations. These streets should have sufficient width to provide two traffic lanes; and, if on-street parking is permitted, sufficient width for parking operation lanes and parking spaces. If a commercial street is used as a thoroughfare additional traffic lanes may be required.

Industrial Streets: Industrial streets provide access to abutting industrial development. They usually have a higher percentage of truck traffic and loading and unloading may take place on the street. Two traffic lanes should be provided with additional street width for parking or loading and unloading if either is permitted. A minimum right-of-way of 60 feet is desirable.

Minor Thoroughfares

These are more important streets in the city system. They perform the function of collecting traffic from residential, commercial, and industrial streets and carrying it to the major thoroughfares. In some cases, they may supplement the major thoroughfare system by facilitating a minor through traffic movement. In either case, they perform an additional function by also serving abutting residential, commercial, or industrial property. Minor thoroughfares should be designed to serve only a limited area to prevent their development as major thoroughfares. Two or four traffic lanes may be required, depending on traffic volumes, and parking may be permitted on both sides. Right-of-way may vary upwards from a recommended minimum of 60 feet.

Major Thoroughfares

Major thoroughfares provide for (1) the movement of traffic from one area of the city to another, (2) through traffic movements, and (3) movement of traffic into and out of the city. The streets which comprise the major thoroughfare system may also serve abutting property; however, THEIR MAJOR FUNCTION IS TO CARRY TRAFFIC. They should not be bordered by uncontrolled strip development. Such development lowers the capacity of the thoroughfare significantly and each driveway is a danger and impedance to traffic flow. Major thoroughfares may range from a two-lane street carrying minor traffic volumes to major expressways with four or more traffic lanes. Design standards vary accordingly. Usually parking should not be permitted on major thoroughfares.

Idealized Major Thoroughfare System

A coordinated system of major thoroughfares forms the basic framework of the planned urban street system (Figure 1). This system, while generally involving about 25 percent of the total street mileage, carries about 80 percent of the total traffic. Major thoroughfares can be divided into four categories: radial streets, crosstown streets, loop streets, and bypasses.

Radial Streets

Radial streets provide for direct traffic movement between the central area and outlying areas. This is a major movement in most cities and the economic strength of the central area depends heavily on the adequacy of the radial thoroughfares.

The Crosstown System

If all radial streets crossed in the central area, an intolerable congestion problem would result. To avoid this problem, it is very important to have a system of crosstown streets which forms a loop around the central business district. These streets route traffic along the border of the central area as it moves from origins on one side to destinations on the other. The system also allows central area traffic to circle the central area and enter near its destination. The effect of a good crosstown system is to free the central area of crosstown traffic, thus permitting the central area to better function in its role as a pedestrian shopping area.

The Loop System

Loop streets move traffic between suburban areas of the city. Although a loop may completely encircle the city, a typical trip would be from an origin near a radial thoroughfare to a destination near another radial thoroughfare. Loop streets do not necessarily carry heavy volumes of traffic, but they function to help relieve central area congestion and shorten travel times between suburban areas. There may be one or more loops, depending on the size of the urban area, and they are generally spaced one-half mile to one mile apart, depending on the intensity of land use.

The Bypass

Bypasses function to carry traffic through or around the urban area. They are usually designed to rural highway standards with control of access. The general effect of the bypass is to expedite the movement of through traffic and to lessen traffic congestion within the city. Occasionally a low traffic volume bypass can be designed to function as a portion of an urban loop.

Philosophy of Approach

The above description of the idealized thoroughfare system applies to an idealized situation. While the same basic principles apply, it is not the purpose of the thoroughfare plan to present an idealistic pattern superimposed on the existing street system. Thoroughfare planning is done for established urban areas and based on anticipated future development. Residential areas, schools, shopping center locations, major industrial areas, railroads, public and semi-public land use locations, topographical features, and many other factores all exert influences on the locations of thoroughfares. It is also necessary that maximum advantage be taken of the existing basic street system which represents a major monetary investment and the thoroughfare plan must be compatible with other elements of the urban planning and development program.

III. POPULATION AND LAND USE

Population Trends

The Halifax Planning Area includes the Town of Halifax and a small portion of Halifax Township around the Town. The current estimated population of the planning area is 750.

It is estimated that the population of Halifax County will decrease by 17.6 percent during the period 1970-1990. Assuming that the population of the Halifax Planning Area will parallel the population decrease of Halifax County, the 1990 estimated population of the planning area is 618.

Land Use Trends

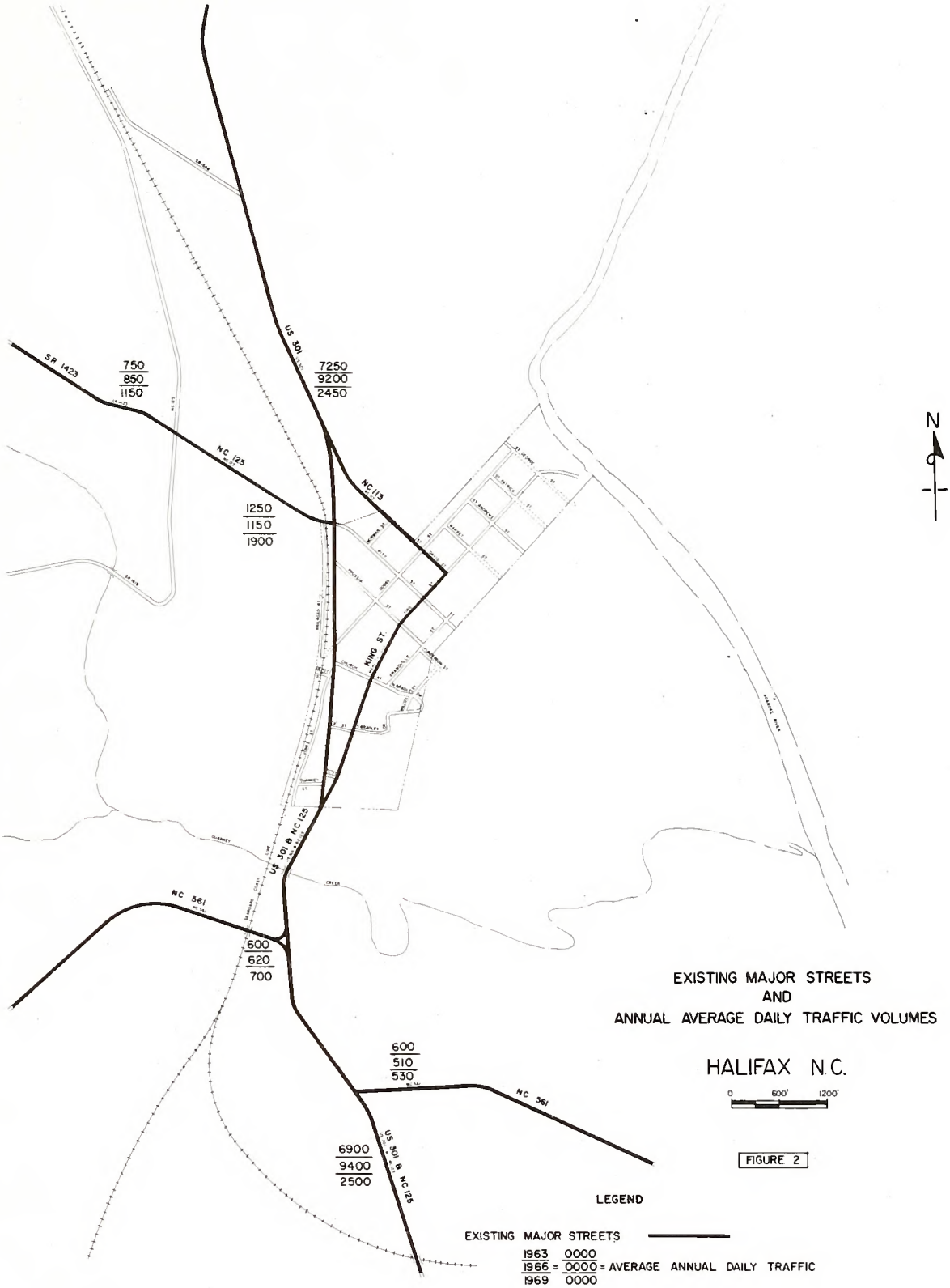
The business area of Halifax is spread along both sides of King Street between Prussia Street and Saint David Street. The major portion of the commercial establishments within the planning area are concentrated in this area. There are a few small neighborhood businesses scattered throughout the planning area; however, the major existing land use is residential.

A relatively large portion of the planning area is to become property of the State and the area and buildings are to be restored to become the Halifax Historic Site.

There are several possible industrial sites in the area with the most logical locations being along the Seaborad Coast Line Railroad and in the vicinity of SR 1423 since it has connections with Interstate 95.

Traffic Volume Trends

A comparison of the 1966 and 1969 average annual daily traffic (ADT) volumes indicates a substantial decrease in traffic along US 301. This decrease was due to the opening of Interstate 95. Traffic on SR 1423 has nearly doubled during this same period and serves as the primary connector between the Town of Halifax and I-95 with a volume of 1900 vehicles per day at the town limits. All other roads in the planning area have shown only slight increases during the 1966 to 1969 period. The 1966 and 1969 average annual daily traffic volumes are shown in Figure 2.


SR 1423
750
850
1150
US 301
7250
9200
2450
NC 125
NC 113
1250
1150
1900
KING ST.
US 301 & NC 125
NC 561
600
620
700
600
510
530
NC 561
6900
9400
2500
US 301 & NC 125
N
EXISTING MAJOR STREETS
AND
ANNUAL AVERAGE DAILY TRAFFIC VOLUMES
HALIFAX N.C.
0 600' 1200'
FIGURE 2
LEGEND
EXISTING MAJOR STREETS
1963 0000
1966 = 0000 = AVERAGE ANNUAL DAILY TRAFFIC
1969 0000

To assist in the evaluation of the Halifax Thoroughfare Plan, an estimate of the through traffic movements was prepared using mathematical models developed by the Planning and Research Department for estimating through travel patterns in urban areas of less than 50,000 population. Input to the models includes the functional classification of the routes entering the area, the population of the study area, average annual daily traffic volumes, percent trucks, and percent other commercial vehicles on the routes. The estimated through travel movements for the Halifax urban area are given in Table 1.

TABLE 1

Estimated 1969 Through Traffic Movements

	NC 125 N	US 301 N	NC 561 E	US 301 & NC 125 S	NC 651 W	SR 1619
US 301 N	50					
NC 561 E	15	55				
US 301 & NC 125 S	80	500	30			
NC 561 W	20	60	5	40		
SR 1619	1	5		5		
SR 1423	35	120	10	70	15	1

The most significant estimated through travel movements are between US 301 North and US 301 South, 500 vehicles per day and between SR 1423 and US 301 North, 120 vehicles per day.

Existing Major Streets

Halifax's existing major street system is comprised of several through streets which cross the planning area. The most important of these streets are US 301 Bypass, US 301 Business, SR 1423, NC 561, NC 125, and Pitt Street.

On the basis of field investigations and existing traffic, the following deficiencies were noted in the existing major street system.

1. Several of the existing streets should be widened to improve traffic operations.

2. There is a need for flashing lights and gates at the crossing of SR 1423 and Seaboard Coast Line Main Line tracks.

IV. PROPOSED THOROUGHFARE PLAN

The recommended thoroughfare plan for Halifax is shown in Figure 3. Based on the investigations of the existing and anticipated traffic volumes, and the current land development trends, the recommended Halifax Thoroughfare Plan is as follows:

Major Thoroughfare System

The proposed major thoroughfare system includes only radials and bypasses and consists of the following existing and proposed facilities.

Radial Thoroughfares

1. NC 125 to the north and south. Gates and flashing lights should be installed at the Seaboard Coast Line Railroad Crossing as a safety precaution.

2. NC 561 to the east and west

3. US 301 to the north and south

4. SR 1423 to the west

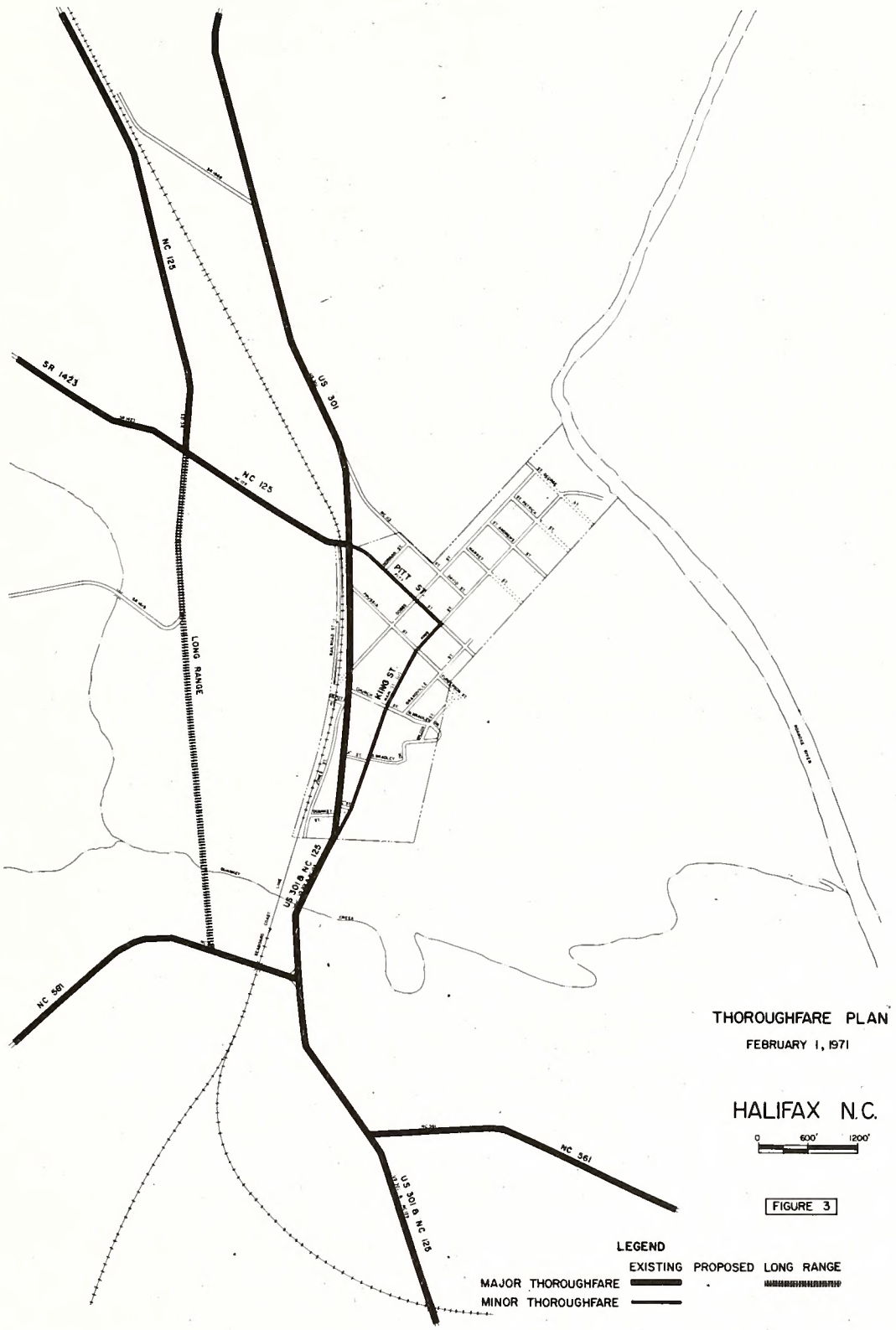
Bypasses

1. US 301

2. NC 125 A long range NC 125 bypass is proposed to the west of the railroad. The bypass would consist of an extension of NC 125 south of SR 1423 to connect to NC 561 and would serve future development west of the railroad. This bypass should be considered as a relatively long range proposal and its need would depend primarily on the future growth of Halifax.

Minor Thoroughfares

The minor thoroughfare system consists of Pitt Street between the US 301 bypass and Main Street between Pitt Street and the US 301 bypass. These minor thoroughfares will provide access to the central area, the Halifax County Courthouse, and the historial area. Pitt Street will replace St. David Street as a major entrance into the central area and should be widened to a minimum width of 36 feet, face to face of curb.


NC 123
US 301
SR 1423
NC 125
PITT ST
KING ST
LONG RANGE
US 301 & NC 125
NC 561
US 301 & NC 125
N
THOROUGHFARE PLAN
FEBRUARY 1, 1971
HALIFAX N.C.
0
600'
1200'
FIGURE 3
LEGEND
EXISTING
PROPOSED
LONG RANGE
MAJOR THOROUGHFARE
MINOR THOROUGHFARE

V. IMPLEMENTATION

There are several tools which are recommended for implementation of the thoroughfare plan. They are as follows:

State Municipal Adoption of the Thoroughfare Plan

Chapter 136, Article 3A, Section 136-66.2 of the General Statutes of North Carolina provides that after development of a thoroughfare plan, the plan may be adopted by the governing body of the municipality and the Highway Commission as the basis for future street and highway improvements in and around the municipality. Once the thoroughfare plan is mutually adopted, negotiations will begin to determine which of the existing and proposed thoroughfares will be a Highway Commission responsibility and which will be a municipal responsibility. Facilities which are designated a Highway Commission responsibility will be constructed and maintained by the Commission, however, the municipality will share in the right-of-way costs with the municipality's share of the cost to be determined at time of construction.

Subdivision Control

A subdivision ordinance requires that every subdivider submit to the Town a plot of his proposed subdivision. Certain standards must be met by the developer before he can be issued a building permit to construct his development. Through this process it is possible to reserve or protect the necessary rights-of-ways for projected streets which are a part of the thoroughfare plan and to require street construction in accordance with the plan.

Official Street Map

A municipality may, through special enabling legislation, adopt an official street map which indicates both existing and future street lines. No new construction or reconstruction of structures would be permitted within the designated future street lines. This would over a period of time, reduce the cost of additional right-of-way along densely developed thoroughfares which will require widening at some future date.

Zoning

A zoning ordinance can be beneficial to thoroughfare planning in that planned locations of various land uses and planned densities of dwellings can be realized. This provides a degree of stability on which to make future traffic projections and to plan streets and highways.

Other benefits of a good zoning ordinance are: (1) the establishment of standards of development which will aid traffic operations on thoroughfares; (2) the minimization of strip commercial development which creates traffic friction and increases the traffic accident potential; and (3) the requirement for provision of off-street parking by new developers with the purpose of eventual prohibition of all curb parking on major thoroughfares.

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